

Rec'd PTO 22 MAR 2005

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU03/01063

BEST AVAILABLE COPY

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. 7: G01N 33/574, 33/66; H01J 49/40		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Derwent WPIDS (World Patent Abstracts); JAPIO (Japanese Patent Abstracts); CAPLUS (Chemical Abstracts); MEDLINE (Medical Abstracts); keywords: oligosaccharide, mucopolysaccharide, mucosaccharide, mass spectrometry, electrospray, cancer, cancer marker		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 278, no. 31, 28619-28634; Wong, N.K. et al. (2003) Characterization of the oligosaccharides associated with the human ovarian tumor marker CA125; see the whole document, but in particular note scheme 1, figure 3, table 1, figure 9, table IV, and discussion.	1-36
P,X	WO 03/016464 A2 (CARBION OY) 27 February 2003; see the examples, figures and table in particular.	1-8, 11, 13-36
X,Y	WO 02/08760 A1 (BIOTRON LIMITED) 31 January 2002; see the whole document but note the figures in particular.	1-7, 11, 13-18, 20-22, 24, 26-27, 29-36
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 3 November 2003		Date of mailing of the international search report 12 NOV 2003
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3292		Authorized officer DAVID HENNESSY Telephone No : (02) 6283 2255

INTERNATIONAL SEARCH REPORT

 International application No.
 PCT/AU03/01063

BEST AVAILABLE COPY

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X,Y	GLYCOBIOLOGY, vol. 13 no. 6, 457-470; Peracaula, R. et al. (2003) Altered glycosylation pattern allows the distinction between prostate-specific antigen (PSA) from normal and tumor origins; see the tables and figures in particular.	1-8, 11, 13-36
P,Y	MOLECULAR GENETICS AND METABOLISM, vol. 78, 193-204; Ramsay, S.L. et al. (2003) Determination of monosaccharides and disaccharides in mucopolysaccharidoses patients by electrospray ionisation mass spectrometry; see the abstract in particular.	19-31
X,Y	ANALYTICAL BIOCHEMISTRY, vol. 242, 8-14; Dwek, M.V. et al. (1996) Oligosaccharide release from frozen and paraffin-wax-embedded archival tissues; see the whole document, but note 'methods and materials' and the figures in particular.	1-8, 11, 13-18, 26-27, 29-36
X,Y	GLYCOBIOLOGY, vol. 10 no. 6, 551-557; Hoja-Lukowicz, D. et al. (2000) High-mannose-type oligosaccharides from human placental arylsulfatase A are core fucosylated as confirmed by MALDI MS; see the introduction, figures and table in particular.	1-8, 11, 13-18, 20-22, 24, 26-27, 19-36
X,Y	THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 267 no. 27, 19248-19257; Capon, C. et al. (1992) Oligosaccharide structures of mucins secreted by the human colonic cancer cell line CL.16E; see the abstract, tables, and figures in particular.	1-8, 11, 13-36
X,Y	THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 276 no. 20, 16695-16703; Ito, A. et al. (2001) A novel ganglioside isolated from renal cell carcinoma; see the abstract, figures and scheme in particular.	1-8, 11, 13-36
X,Y	THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 261 no. 27, 12796-12806; Fukuda, M. et al. (1986) Structures of o-linked oligosaccharides isolated from normal granulocytes, chronic myelogenous leukemia cells, and acute myelogenous cells; see the abstract, figures, and tables in particular.	1-8, 11, 13-36
X,Y	THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 269 no. 29, 18794-18813; Lo-Guidice, J. et al (1994) Sialylation and sulfation of the carbohydrate chains in respiratory mucins from a patient with cystic fibrosis; see the abstract, figures, tables and schemes in particular.	1-7, 9-10, 12-18
X,Y	CANCER RESEARCH, vol. 48, 2125-2131; Martensson, S. et al. (1988) A carbohydrate epitope associated with human squamous lung cancer; see the abstract, tables and figures in particular.	1-8, 11, 13-36
X,Y	THE PROSTATE, vol. 27, 187-197; Belanger, A. et al. (1995) Molecular mass and carbohydrate structure of prostate specific antigen: studies for establishment of an international PSA standard; see the abstract, 'materials and methods', tables and figures in particular.	1-8, 11, 13-36
X,Y	ANALYTICAL BIOCHEMISTRY, vol. 248, 63-75; Oligosaccharide characterization and quantitation using 1-phenyl-3-methyl-5-pyrazolone derivatization and matrix-assisted laser desorption/ionization time-of-flight mass spectrometry; see the abstract, tables, and figures in particular.	19-31

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/01063

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GLYCOBIOLOGY, vol. 5 no. 1, 105-115; Fukushima, K. et al. (1995) Carbohydrate structures of a normal counterpart of the carcinoembryonic antigen produced by colon epithelial cells of normal adults; see the abstract, introduction, figures and tables in particular.	1-8, 11, 13-36
A	WO 01/36977 A2 (MATRITECH, INC.) 25 May 2001; see the examples in particular.	
A	US 6228654 B1 (Chait et al.) 8 May 2001; see the examples in particular.	

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU03/01063

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	2003016464	FI	20030218	FI	20010817
WO	200208760	AU	72220/01	BR	0112644
		EP	1319178	CA	2416375
US	6228654	NONE			
WO	200136977	AU	16152/01	AU	16589/01
		CA	2390607	EP	1232177
		JP	2003528296	EP	1240521
			WO	20016470	
END OF ANNEX					

BEST AVAILABLE COPY